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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,266	04/11/2001	Nathan Jacob Litke	01339.0005.00US01	3520

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EXAMINER

PHAN, THAI Q

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/833,266

Applicant(s)

LITKE ET AL.

Examiner

Thai Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 1-9, 12-23 and 25 is/are allowed.  
6) ☒ Claim(s) 10, 11, 24 and 26 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 4/11/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

This Office Action is in response to applicants' amendment filed on Mar. 25, 2004. Claims 1-26 are now pending in the Action.

#### ***Information Disclosure Statement***

The information disclosure statement filed 04/11/2001 has been considered.

#### ***Drawings***

The drawings filed on 04/11/2001 are acceptable for examination.

#### ***Terminal Disclaimer***

The terminal disclaimer filed on Mar. 25, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of the US patent no. 6,603,473 has been reviewed and is accepted. The terminal disclaimer has been recorded.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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1. Claims 10, 11, 24, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Einkauf et al, US patent no. 5,283,860.

As per claim 10, Einkauf anticipates a method and system for displaying trimmed surfaces for objects on a computer graphic system with feature limitations identical to the claimed invention (Abstract). According to Einkauf, the method include steps:

Defining a mesh of polygons for representing an object surface within a prescribed tolerance of the object surface (Figs. 1, 10, col. 2, lines 11-31), and

Projection of a trim curve defining a trim area on the mesh, wherein boundary vertices of polygons located near the trim curve lie on the trimming curve projection (col. 3, line 20 to col. 4, line 59, col. 5, lines 26-48, col. 6, lines 44-56, col. 7, line 49 to col. 9, line 63, for example) to locate vertices of polygons on the mesh of the object surface through the linear interpolation (col. 5, lines 26-48, col. 9, lines 12-45).

As per claim 11, Einkauf anticipates meshes of polygons and subdivided meshes of polygons as claimed (col. 4, line 35 to col. 5, line 8, col. 6, line 44 to col. 7, line 13, for example).

As per claim 24, Einkauf anticipates a method for trimming object surface through a mesh of polygons to generate a trimmed mesh representation with feature limitations identical to the claimed invention. According to Einkauf, the trimmed mesh representation includes steps means and steps for

Defining a mesh of polygons for representing an object surface (Figs. 1, 10),

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Projection of a trim curve defining a trim area on the mesh, wherein boundary vertices of polygons located near the trim curve lie on the trimming curve projection (col. 3, line 20 to col. 4, line 59, col. 5, lines 26-48, col. 6, lines 44-56, col. 7, line 49 to col. 9, line 63, for example) for trimming operation through light shading interpolation of the vertice points on the boundary surface (col. 5, lines 26-48, col. 9, lines 12-45).

As per claim 26, Einkauf anticipates a processor for performing mesh trimming as claimed.

### ***Response to Arguments***

Applicant's arguments to the amended claims filed Mar. 25, 2004 have been fully considered but they are not persuasive.

In response to applicants' argument Einkauf fails to teach locating boundary vertices on trim curve projections (pages 8 and 9), the examiner disagrees with. First, the argued feature of "locating boundary vertices on trim curve projections" does not appear in the rejected claims. The claims required "boundary vertices of polygons located near the trim curve lie on the trim curve projection" as cited in the claims 10 and 14. In other words, it is projecting trimming curve on boundary vertices of polygons for vertice points near the trimming curve. Such feature is anticipated in Einkauf. In fact, Einkauf anticipates method and system for trimming a mesh representation of the object surface. The trimming method requires step and means for projecting a trim curve defining a trim area on the mesh, wherein boundary vertices of object mesh polygons located near the trim curve lie on the trimming curve projection

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(col. 3, line 20 to col. 4, line 59, col. 5, lines 26-48, col. 6, lines 44-56, col. 7, line 49 to col. 9, line 63, for example). Or stated in other way, Einkauf anticipates projecting trimming curve on the boundary mesh of polygons to locate vertice points near the trimming curve for trimming through linear color interpolation (col. 5, lines 26-48, col. 9, lines 12-45).

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US patent no. 5,488,684, issued to Gharachorloo et al, on Jan. 1996

2. US patent no. 5,701,404, issued to Stevens et al, on Dec. 1997

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thai Phan whose telephone number is 703-305-3812.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703-305-9704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Thai Phan*

Thai Phan  
June 02, 2004

*Patent Examiner*

*AU: 2128*